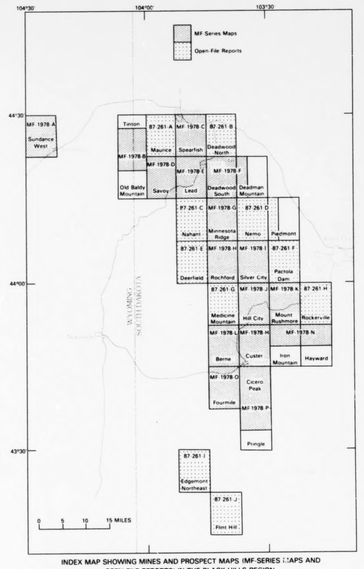
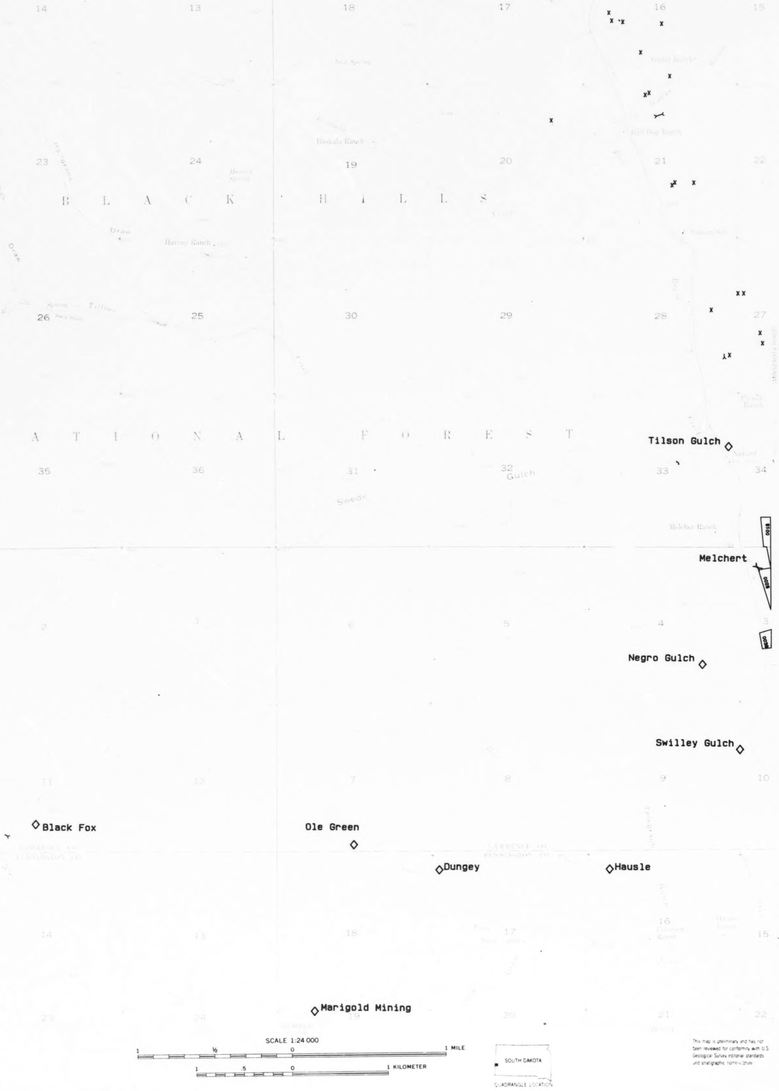
DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY



INDEX MAP SHOWING MINES AND PROSPECT MAPS (MF-SERIES MAPS AND OPEN-FILE REPORTS) IN THE BLACK HILLS REGION



Base from U.S. Geological Survey, 1986

This map is preliminary and has not been reviewed for conformity with U.S. Geological Survey editorial standards and stratigraphic nomenclature

MAP OF MINES, PROSPECTS, AND PATENTED MINING CLAIMS, AND CLASSIFICATION OF MINERAL DEPOSITS IN THE NAHANT 7 ½ MINUTE QUADRANGLE, BLACK HILLS, SOUTH DAKOTA

By
Ed DeWitt, D. P. Buscher, Anna Burack Wilson, and T.M. Johnson

1988

EXPLANATION

Mine--Location known. Distinguished from prospect by name of mine and size of symbol. Alternate names or synonyms in parentheses. If there is enough space on the map, the entire mine name and synonyms are shown; otherwise, mine name may be abbreviated and synonyms deleted from map. Full mine names and all synonyms are shown in the "Alphabetic list of mines"

Trench

◇ **Mine**--Approximate location shown. Open pit, shaft, adit, or other type of opening

Prospect

⊣ **Adit**

X **Pit**

⊢⊣ **Trench**

Patented claim--See alphabetic and numeric lists of patented claims. Asterisk (*) indicates part of claim extends into adjacent quadrangle. Dollar sign ($) indicates most of claim in adjacent quadrangle. Boundaries between claims not shown

Lode claim--Orientation of number parallel to long axis of claim

Placer claim--Number approximately in center of claim

INTRODUCTION

This map is one in a set of 26 maps (see index map) at 1:24,000 scale of the Black Hills region of South Dakota and Wyoming on which are shown a geologic classification of mines, a bibliography of mineral deposits, and locations of active and inactive mines, prospects, and patented mining claims. Some of these maps have been published as U.S. Geological Survey Miscellaneous Field Studies Maps (MF-series) and some as U.S. Geological Survey Open-File Reports (OF-series); see index map. An earlier unpublished version of this set of maps was the data base from which plate 4 (scale 1:250,000) of DeWitt and others (1986) was compile.. Subsequent to that publication the set has been revised and updated and prospects and patented claims have been added. These revised and more detailed 1:24,000-scale maps should be used for the equivalent areas of plate 4 of DeWitt and others (1986).

J. J. Norton, J. A. Redden, J. P. Grims, and V. L. Roberts reviewed the set of maps. Rob Yambrick helped digitize much of the information.

SOURCES OF INFORMATION

Outlines of patented mining claims were obtained from 1:24,000-scale Forest Service Status Plats, available for inspection at the U.S. Forest Service, Rocky Mountains Region, 11,117 West 8th Avenue, Denver, CO 80225. Names of most patented claims were obtained from Wilhelm and others (1978). Other names were obtained from the Lawrence County Courthouse, Deadwood, South Dakota, and the Pennington County Courthouse, Rapid City, South Dakota. Claims have been located as accurately as possible, but this map is not to be used for legal nor precise locations of mining claims.

Locations of mines and prospects were compiled from all available published and unpublished data. The locations of active and inactive mines in this quadrangle were taken from Bayley (1972a, 1972b), Connolly and O'Harra (1929), Harrer (1966), Luza (1970), O'Harra (1902), U.S. Bureau of Mines (1954, 1986), and U.S. Geological Survey (1986). Also, in some instances, different sources of information gave conflicting location information for mines with the same name. Where possible, this conflict was resolved by comparing the name of the mine to adjacent patented claims, by comparing the description of the deposit to the known geology and topography of the area, or by communication with past owners of the property. In some instances, a unique location was not possible with existing information; in that event the most logical location was chosen. The location of some or many mines on this map may differ from those in present data bases such as the U.S. Bureau of Mines Mineral Inventory Location System (MILS) or the U.S. Geological Survey Mineral Resources Data System (MRDS), formerly the Computerized Resources Information Bank (CRIB).

Locations of prospects in this quadrangle were taken from Bayley (1972a, 1972b). Because many quadrangles, or parts of quadrangles, have not been mapped in as much detail as other quadrangles, comparison of the density of prospects from one quadrangle to another, or even within one quadrangle, is not warranted. As an example, part of a quadrangle may be shown on the map as having more prospects than another part, but the first part may have been mapped in greater detail than the second part. Similarly, a part of a quadrangle may have many prospects that are not shown on this map because the original source of information did not show prospect pits.

Geologic data for the map are from Bayley (1972a, 1972b), Cookman (1981), Darton and Paige (1925), DeWitt and others (1986), Kleinkopf and Redden (1975), J. A. Redden (unpub. data, 1986), and Redden and Norton (1975).

PRECISION OF LOCATION INFORMATION

All mine symbols except the unfilled diamond (◇) indicate that the location of the deposit is known within a 200-foot radius. The type of opening at a mine (adit, shaft, open pit, trench, and others) is designated by one of ten different symbols. The unfilled diamond symbol indicates that the location is known only to within a 1/4 mile radius, and that the type of mine opening is unknown.

Mines and prospects whose locations could not be verified to within less than a 1/4 mile radius were not plotted on the map.

PATENTED CLAIM AND MINE LISTS

Patented mining claims are listed both numerically and alphabetically. Mines are listed alphabetically. For ease in locating the claim or mine on the map, the legal description (section, township, range) is given.

Each patented claim on the map is represented by a number keyed to the numeric and alphabetic listings. Where possible, the claim numbers are plotted approximately in the center of the claim and parallel to its long axis. Boundaries between adjacent claims are not shown. An asterisk (*) following a claim number indicates that most of the claim is in this quadrangle, but it extends into the adjacent quadrangle. A dollar sign ($) following a claim number indicates that most of the claim is in the adjacent quadrangle, but part of it is in this quadrangle. Claims outlined with a solid line are patented lode claims; claims outlined with a dotted line are patented placer claims. Many placer workings on unpatented claims have not been plotted on the maps, principally because the workings lacked a name. On the map, the most common or most used name of a mine is normally next to its mine symbol. If there is space, any alternate names or synonyms are in parentheses following the most common name. On some maps, where space does not permit showing the first name or any alternate names, the names are shown by a single letter, two letters, or an abbreviation of the name; the mines are keyed to that letter or abbreviation in the alphabetic and numeric lists. Mines with more than one name have the alternate name(s) or synonym(s) shown in parentheses in the alphabetic lists. The first alternate name or synonym is also alphabetized in the alphabetic list of mines; second or third alternate names may not be alphabetized. Uncertain alternate names are not alphabetized and are followed by a query (?).

CLASSIFICATION OF MINES AND DEPOSITS

Mines and deposits are categorized according to geologic criteria of age, environment of formation, and contained metals, as in DeWitt and others (1986, p. 52-53). Deposit-type letter designations (C, P, and so on) corresponding to those in DeWitt and others (1986) for deposit types are used in the alphabetic list of mines. The criteria used for the deposit types are briefly summarized below and are explained more fully in DeWitt and others (1986).

PRINCIPAL TYPES OF DEPOSITS

C--Proterozoic carbonate-, silicate-, and sulfide-facies iron-formations are syngenetic stratiform deposits of gold, silver, and arsenic formed in a submarine environment about 1.8-2.2 Ga (billion years ago). The metals were concentrated in sedimentary and volcaniclastic rocks by biologic, sedimentologic, or hydrothermal processes.

P--Bog-iron deposits are colluvial concentrations of iron-rich material found in stream bottoms and along canyon walls that are formed in the present-day surface weathering environment. Cool, moist conditions and locally reducing environments concentrate the iron and minor manganese.

REFERENCES CITED

Bayley, R. W., 1972a, Geologic field compilation map of the northern Black Hills, South Dakota: U.S. Geological Survey Open-File Report 72-29, scale 1:48,000.

_____, 1972b, A preliminary report on the geology and gold deposits of the Rochford district, Black Hills, South Dakota: U.S. Geological Survey Bulletin 1332-A, 24 p.

Connolly, J. P., and O'Harra, C. C., 1929, The mineral wealth of the Black Hills: South Dakota School of Mines and Technology Bulletin 16, 418 p.

Cookman, R. G., 1981, Structural analysis of Precambrian sedimentary rocks of the Swede Gulch Formation, Nahant, South Dakota: Kalamazoo, Western Michigan University, M.S. thesis, 120 p.

Darton, N. H., and Paige, Sidney, 1925, Central Black Hills [quadrangle], South Dakota: U.S. Geological Survey Geologic Atlas of the United States, Folio 219, 34 p.

DeWitt, Ed, Redden, J. A., Wilson, Anna Burack, and Buscher, David, 1986, Mineral resource potential and geology of the Black Hills National Forest, South Dakota and Wyoming, with a section on Salable commodities, by J. S. Derach, U.S. Forest Service: U.S. Geological Survey Bulletin 1580, 135 p.

Harrer, C. M., 1966, Iron resources of South Dakota: U.S. Bureau of Mines Information Circular 8278, 160 p.

Kleinkopf, M. D., and Redden, J. A., 1975, Bouger gravity, aeromagnetic, and generalized geologic maps of part of the Black Hills of South Dakota and Wyoming: U.S. Geological Survey Geophysical Investigations Map GP-903, scale 1:250,000.

Luza, K. V., 1970, Origin, distribution, and development of bog iron in the Rochford district, north-central Black Hills, South Dakota: U.S. Bureau of Mines Preliminary Report 177, 30 p.

O'Harra, C. C., 1902, The mineral wealth of the Black Hills: South Dakota School of Mines and Technology Bulletin 8, 88 p.

Redden, J.A., and Norton, J. J., 1975, Precambrian geology of the Black Hills, in U.S. Congress, Senate Committee on Interior and Insular Affairs, Mineral and water resources of South Dakota: U.S. 94th Congress, 1st session, p. 21-28.

U.S. Bureau of Mines, 1954, Black Hills mineral atlas, South Dakota, Part I: U.S. Bureau of Mines Information Circular 7688, 123 p.

_____, 1986, Mineral Inventory Location System (MILS): U.S. Bureau of Mines active computer file; data available from U.S. Bureau of Mines, Intermountain Field Operations Center, Building 20, Denver Federal Center, Denver, CO 80225.

U.S. Geological Survey, 1986, Mineral Resources Data System (MRDS, formerly Computer Resources Information Bank, CRIB): U.S. Geological Survey active computer file; data available from U.S. Geological Survey, Branch of Resource Analysis, Building 25, Denver Federal Center, Denver, CO 80225.

Wilhelm, A. R., Bowers, J. R., Jones, D. T., and Patel, S. K., 1978, Map of mineral claims of the northern Black Hills, Lawrence County, South Dakota, Map nos. 1-4, scale 1:19,200: South Dakota School of Mines and Technology, Mining Engineering Department Map, available for inspection at Lawrence County Courthouse, Deadwood, SD 57732.

Alphabetic list of mines

[Deposit-type letter designations are explained in the text]

Deposit Type	Name of Mine	Location
P	Black Fox	Sec. 11 T2S R2E
P	Dungey	Sec. 17 T2S R3E
P	Hausle	Sec. 16 T2S R3E
C	Marigold Mining	Sec. 18 T2S R3E
P	Melchert	Sec. 3 T2S R3E
P	Negro Gulch	Sec. 4 T2S R3E
P	Ole Green	Sec. 7 T2S R3E
P	Swilley Gulch	Sec. 9 T2S R3E
P	Tilson Gulch	Sec. 33 T3S R3E

Alphabetic list of patented claims

[Asterisk (*) indicates that part of claim extends into adjacent quadrangle; dollar sign ($) indicates that most of claim is in the adjacent quadrangle]

Claim number	Name of Claim	Location
0035	Beta	Sec. 3 T2S R3E
0025	Etna No.2	Sec. 3 T2S R3E
0015	Etna No.4	Sec. 34 T3S R3E

Numerical list of patented claims

[Asterisk (*) indicates that part of claim extends into adjacent quadrangle; dollar sign ($) indicates that most of claim is in the adjacent quadrangle]

Claim number	Name of Claim	Location
0015	Etna No.4	Sec. 34 T3S R3E
0025	Etna No.2	Sec. 3 T2S R3E
0035	Beta	Sec. 3 T2S R3E